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## Developing Effective, Sustainable, Mutually Beneficial International Collaborations in Engineering and Technology

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# Developing Effective, Sustainable, Mutually Beneficial International Collaborations in Engineering and Technology

ASEE Global Colloquium, Cape Town, RSA October 2008



## Developing Effective, Sustainable, Mutually Beneficial International Collaborations in Engineering and Technology

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- Eugene Coyle, Dublin Institute of Technology
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## Real Experience!

We share, not a conceptual exploration of what might be, but rather a practical, reality-based view of best practices that derive from our institutions' ongoing effort to evolve sustainable linkages.



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## Highlight a range of possibilities for such linkages; including, but not limited to:


- Student Exchange
- Faculty Exchange
- Faculty Collaboration – both instruction and research and development



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## We then share some of the key characteristics that make each collaboration type possible and successful, e.g.:

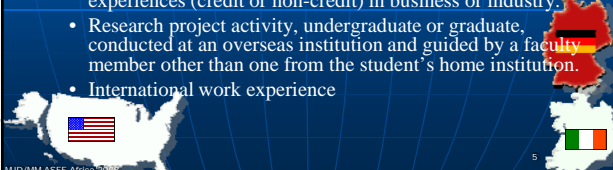
- Institute Calendar matching
- Course equivalency mapping for accreditation
- Time-to-degree considerations



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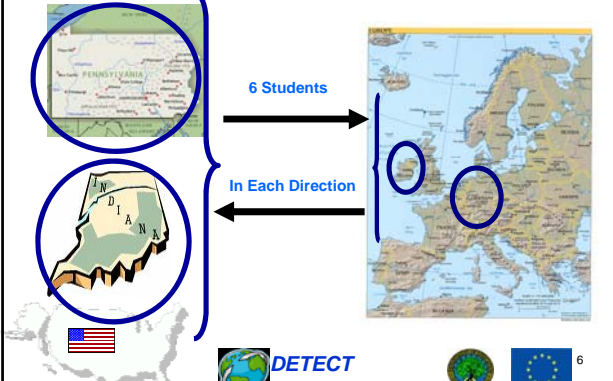
## Range of possibilities: 1

- **Student Exchange.** A variety of mechanisms exist to provide students international experience. These include, but are not limited to:
  - ✓ Enrollment in classes or study abroad.
  - ✓ International study tours lead by faculty from the students' home institution.
  - ✓ International content/activities infused into existing courses
  - International internships or cooperative learning experiences (credit or non-credit) in business or industry.
  - Research project activity, undergraduate or graduate, conducted at an overseas institution and guided by a faculty member other than one from the student's home institution.
  - International work experience



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## Annual Student Exchange Plan



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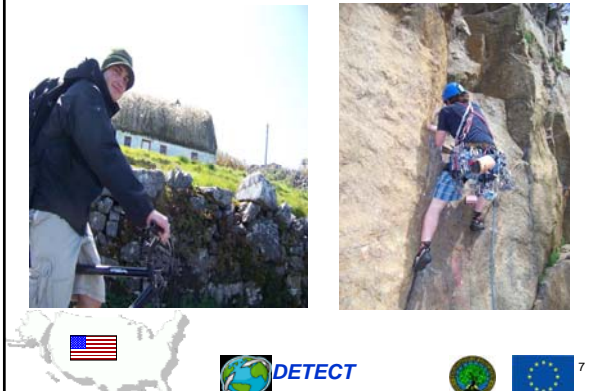
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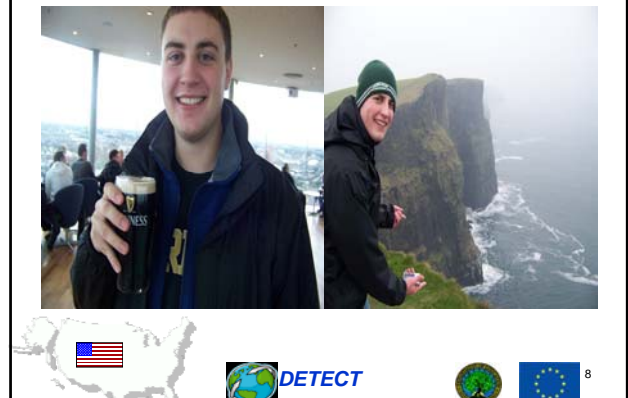
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## New Challenges



## It's Different Here



## Range of possibilities: 2

### ✓ Faculty Exchange

- ✓ ■ effective international faculty experience and collaboration constitutes an essential precursor building block necessary before any widespread international student experience can occur.
- ✓ ■ as simple an experience as merely traveling and spending some time at the exchange institution, preferably while the counterpart faculty member is there as well.
  - The most important part of such experience is that sufficient time is provided to go beyond merely "popping in & sightseeing".
- ✓ ■ long exchanges and sabbaticals. These could involve full instructional responsibility for a course and more.
  - Alternatively specific project focused exchanges, e.g., accreditation or facility planning, can also be valuable.



## Range of possibilities: 3

**Faculty Collaboration.** A descriptor that covers a wide range of other possibilities, e.g.:

- research collaboration. Writing collaborative grant/funding proposals
- ✓ • distance learning technology makes faculty and student collaboration on course instruction a distinct possibility--Team teaching, with faculty from internationally separated institutions
- Membership on collaborating program advisory committees
- Sponsorship/leadership of a collaborative student club/organization activity
- Collaborative book authorship
- Serving as external program/course examiner
- Joint paper authorship



## Case study-identified factors

- Institutional calendar matching
- Course equivalency mapping
- Accreditation
- Time-to-degree considerations
- Example procedures
  - making student counselors/program advisors aware of the opportunities
  - Student selection
  - visa and immigration regulations. Institutions also bear some responsibility for exercising due diligence for the safety of their students.
  - Careful orientation procedures



## Key Characteristics of Effective Collaborations

- a long-term and serious perspective that systematically builds the linkage.
- A three-to-five year planning time frame seems most appropriate for the initial phase.
- Commensurate investment of time and money is a concomitant necessity.
- the partner(s) must be carefully selected for a high level of "goodness of fit".
- Our experience was one which began with strong and consistent signals by institutional and unit leaders.
- seed funding and other support systems



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## Project Management



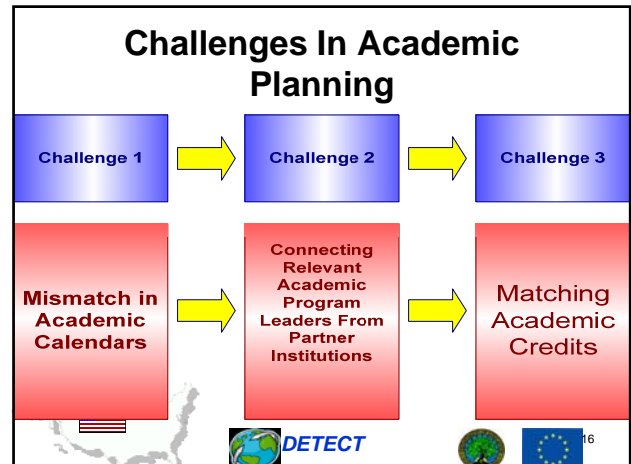
## Calendar comparison

Month	Purdue University	Dublin Institute of Technology
August	First 10 days typically holiday Week before classes start reserved for orientation Fall Semester Classes start circa 20th	
September		Sept 19 <sup>th</sup> classes begin
October		
November		
December	Fall Semester Classes end circa 11th	Classes end circa December 15th
January	Spring Semester Classes start circa 8th	January 9-10 Exam week January 30 Classes begin
February		
March		
April		April 10-17 <sup>th</sup> Easter Holiday
May	Spring Semester Classes end circa 7th	May 15 <sup>th</sup> exams begin May 22 classes end
	Maymaster classes start circa 14 <sup>th</sup> Module 1	
June	Summer Semester Module 2	
July	Summer Semester Module 3	

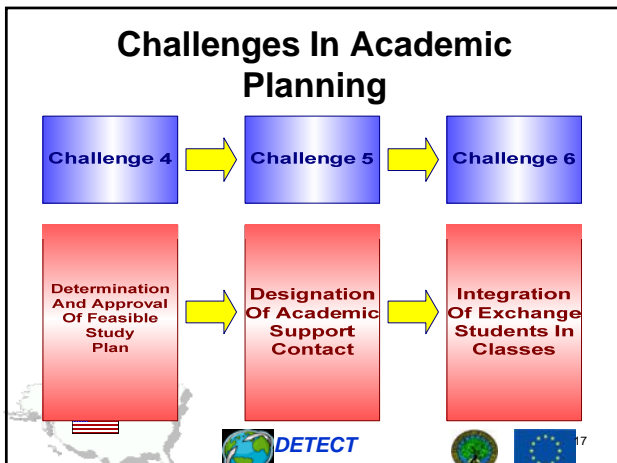
## MEMORANDUM OF UNDERSTANDING (MOU)

- **THIS AGREEMENT**, entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2004, by and between Purdue University, West Lafayette, Indiana, U.S.A. and \_\_\_\_\_
- **I. Goals:** ...desire to promote the enrichment of their teaching and learning, research and discovery, and engagement missions; and desire to strengthen and expand the mutual contacts between the two universities; and desire to provide for an exchange of faculty and students and other collaboration between the two universities...
- **II. NOW THEREFORE**, it is mutually agreed as follows:
  - A. Short and Long-term Faculty Exchange
  - B. Undergraduate and Graduate Student Exchange
  - C. Collaborative Research and Discovery, Learning and Teaching, and Engagement
- **III. Period of Agreement** - This Agreement shall be effective \_\_\_\_\_, 2004, and will remain in force for a period of five years. Prior to the expiration date, the agreement may be reviewed for possible renewal for a further five-year period.
- **IV. Activities Under This Agreement** - Expectations
- **VI. Funding of Activities**
- **VII. Nondiscrimination**

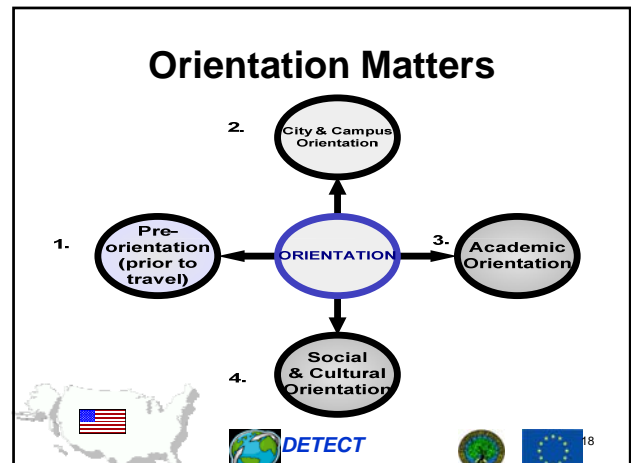
## Challenges In Academic Planning



## Challenges In Academic Planning



## Orientation Matters



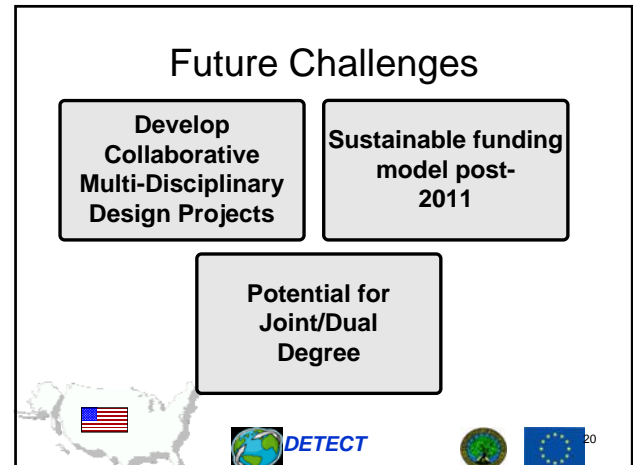
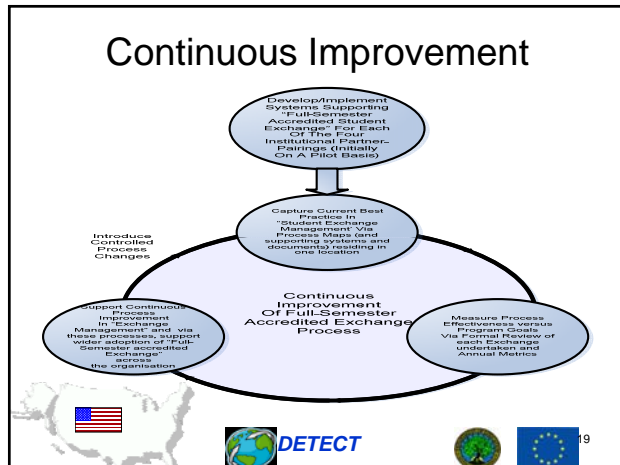
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